To: Deschambault, Lynda[Deschambault.Lynda@epa.gov]; Lombardi, Marc

(marc.lombardi@amecfw.com)[marc.lombardi@amecfw.com]

**From:** Brown, Anthony R (RM) **Sent:** Wed 11/30/2016 5:26:28 PM

Subject: RE: Leviathan Mine - Information Regarding Revegetation Treatability Study Baseline Soil

Sampling in ACSA

removed.txt

Hi Marc, request AMECFW please follow up and address the question from Lynda below. Thanks... Tony...

From: Deschambault, Lynda [mailto:Deschambault.Lynda@epa.gov]

Sent: Wednesday, November 30, 2016 7:55 AM

To: Brown, Anthony R (RM)

Cc: Lombardi, Marc (marc.lombardi@amecfw.com); Doug Carey; Greg Reller; Cory Koger

Subject: FW: Leviathan Mine - Information Regarding Revegetation Treatability Study Baseline Soil

Sampling in ACSA

Dear Mr. Brown,

EPA is completing our review and comments on your Sampling Plan for Hydrocarbon Investigation dated 6/1/16.

Do you have any additional details on this?

Lynda

From: Carey, Douglas@Waterboards [mailto:douglas.carey@waterboards.ca.gov]

Sent: Monday, November 07, 2016 7:27 AM

**To:** Deschambault, Lynda < <u>Deschambault.Lynda@epa.gov</u>>; <u>gr@burlesonconsulting.com</u>; <u>Cory.s.koger@usace.army.mil</u>

Cc: Ferguson, Scott@Waterboards < <a href="mailto:scott.ferguson@waterboards.ca.gov">scott.ferguson@waterboards.ca.gov</a>; Tom Bloomfield (<a href="mailto:tbloomfield@thegallaghergroup.com">tbloomfield@thegallaghergroup.com</a>) <a href="mailto:tbloomfield@thegallaghergroup.com">tbloomfield@thegallaghergroup.com</a>)

Subject: FW: Leviathan Mine - Information Regarding Revegetation Treatability Study Baseline

Soil Sampling in ACSA Hello all, I'm not sure why the email below was sent only to me. It appears AMEC encountered soil with "hydrocarbon" odor while performing baseline soil sampling for their revegetation work at Leviathan Mine. Lynda and Greg, where you aware of this? Please let me know if you would like to discuss. Douglas Carey, P.G. Senior Engineering Geologist Leviathan Mine Regional Water Quality Control Board, Lahontan Region 2501 Lake Tahoe Blvd. South Lake Tahoe, CA 96150 (530) 542-5468 douglas.carey@waterboards.ca.gov

From: Lombardi, Marc [mailto:Marc.Lombardi@amecfw.com]
Sent: Friday, November 04, 2016 3:11 PM

To: Carey, Douglas@Waterboards

**Cc:** Brown, Anthony R (RM); Cohen, Adam; Sandy Riese; Jefferson, Jill; Grant Ohland - (gohland@ohlandhydrogeo.com)

**Subject:** Leviathan Mine - Information Regarding Revegetation Treatability Study Baseline Soil Sampling in ACSA

Doug,

While performing baseline soil sampling on September 6, 2016 in support of the Revegetation Treatability Study, Amec Foster Wheeler field crews encountered soil with what was described as resembling a "hydrocarbon" odor. This observation was made in a single boring at 4.5 feet below ground surface at the original location of Hydrology Plot 2 (see attached figure and photos of the area). The soil in question was gray in color as opposed to the soils in the upper portion of the borehole, which were pale brown to brown in color. Upon the observance, the field sampling team stopped work until they could return with proper field monitoring equipment. The borehole was temporally covered, but it was not backfilled. As a side note, the first boring at the original Hydrology Plot 2 (approximately 25 feet away) was previously drilled and sampled to 6 feet bgs with no anomalous observations. Because of the uncertainty of the observations at the time and to avoid the area, Hydrology Plot 2 was relocated further to the west along the access road for LOC-34 and adjacent to Hydrology Plot 1.

When returning to the borehole on September 15, 2016, Amec Foster Wheeler personnel used a flame ionization detector (FID) and photoionization detector (PID) to take headspace readings from the collected soil sample. There were no detections from either the PID or FID; however, the sample was collected about 1.5 weeks prior to the FID/PID analysis and stored in a Ziploc bag. Therefore, field crews returned and collected additional sample from the borehole at a depth of approximately 4.5-5 feet bgs using a hand auger. The fresh sample had a headspace reading of 0.1 ppm on the FID and 1.4 ppm on the PID, suggesting that if the soil were affected by hydrocarbons in the past, the residuals are highly weathered as both of these readings are very low. The borehole was later backfilled on September 23, 2016.

We have had no further activity at this location, but we wanted you to be aware of this observation. The backfilled borehole location can still be discerned on the ground surface

Should you have any questions or comments please contact Tony Brown at (714) 228-

## 6770 or anthony.brown@bp.com.

Thanks,

Marc

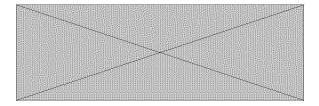
## Marc R. Lombardi, CEM, PG

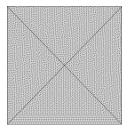
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